

## ABSTRACT

A method is provided for positioning the individual elements of a microphone arrangement including at least two such elements. The spacing among the microphone elements supports the generation of numerous combinations of the signal of interest and a sum of interfering sources. Use of the microphone element placement method leads to the formation of many types of microphone arrangements, comprising at least two microphone elements, and provides the input data to a signal processing system for sound discrimination. Many examples of these microphone arrangements are provided, some of which are integrated with everyday objects. Also, enhancements and extensions are provided for a signal separation-based processing system for sound discrimination, which uses the microphone arrangements as the sensory front end.